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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,561	11/20/2001	Mitsuru Endo	MAT-8201US	1678

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RATNER AND PRESTIA
 Suite 301,
 One Westlakes, Berwyn
 P.O. Box 980
 Valley Forge, PA 19482-0980

EXAMINER

VO, HUYEN X

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,561

Applicant(s)

ENDO ET AL.

Examiner

Huyen Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-13,15-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-13,15-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant has submitted an amendment filed 1/5/2005, amending claims 1, 3, 13, 15, 17, and 19, while arguing to traverse the art rejection based on amended limitation regarding *"determining candidates is performed by speech recognition processing"* and *"the inputted utterance is recognized "in order on a unit of the word-string from a beginning of the inputted sentence" (second paragraph on page 8 of the remarks/argument section)*. Applicant's arguments have been considered but are not persuasive. Huang et al. (US 5829000) fully anticipates these limitations in that the speech recognizer analyzes the input speech utterance (*word/sentence*) to determine speech recognition candidate words/sentence and displays the results for user selection (e.g. *"wreck a nice beach"*, *"wreck a nice peach"*, and *"wreck an ice leach"* in col. 6, lines 1-52). Huang et al. teach that the speech recognizer analyzes the input speech on a frame-by-frame basis from starting frame to ending frame (*continuous signal processing*). For reasons stated above, previous ground of rejection is maintained.

2. Applicant also argues to traverse prior art rejection of claim 5 based on a limitation regarding *"a word-string preparing section for preparing a word-string candidate based on one to several words from the extracted feature amount and the word candidate by using at least any one of a language model and an acoustic model"* (see page 9 of the remarks/arguments section). The applicant specifically argues that the *"Huang '000 does not disclose an apparatus that prepares the word-string candidate*

based on "words from the extracted features amount" and based on "the word candidate". The examiner respectfully disagrees. Huang et al. (US 5829000) fully anticipates this limitation specifically cited in col. 6, lines 1-67 and/or referring to element 406-407 in figure 4A. The keyboard 406 and mouse 407 in figure 4A are used to receive input from the user to select/pick/edit speech recognition candidates. In fact, the functionality of these two devices is well known in the art. Thus, previous ground of rejection is maintained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. (US Patent No. 5829000).

5. Regarding claims 1, 13, and 17, Huang et al. disclose a method, a storage medium, and a computer program product for inputting a text comprising: (a) a step of inputting a sentence by utterance (*col. 6, ln. 53-67*); (b) a step of determining candidates of word-strings which consist of one or more words of the inputted utterance by speech recognition processing (*col. 6, ln. 1-52*); (c) a step of displaying the candidates (*col. 6, ln. 1-52*); and (d) a step of selecting the displayed candidate by a

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user (*col. 6, ln. 1-52*); whereby, the inputted utterance is recognized by which said candidate determining step (b), said displaying step (c) and said selecting step (d) are repeated in order on a unit of the word-string from a beginning of the inputted utterance (*figure 5A*).

6. Regarding claim 21, Huang et al. further disclose a method for inputting a text according to claim 1, wherein said candidate determining step (b) determines a word-string on the basis of a language information and an acoustic information of the selected word-strings when there are pre-selected word strings (*any speech recognition system must use language models and acoustic models in the speech recognition process. Referring to figure 4A*).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-12, 15-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US Patent No. 5829000) in view of Huang et al. (US Patent No. 5937384).

9. Regarding claim 5, Huang et al. (5829000) disclose an apparatus for inputting a text comprising: an input section for inputting an utterance (*col. 6, ln. 53-67*); a word candidate preparing section for preparing a following word candidate from a fixed word string by using a language model (*col. 6, ln. 1-52*); a word-string preparing section for preparing a word-string candidate based on one to several words from the extracted feature amount and the word candidate by using at least any one of a language model and an acoustic model (*col. 6, ln. 1-52*); a display section for displaying the word-string candidate (*col. 6, ln. 1-52*); an operating section for a user to select the word-string candidate being displayed (*col. 6, ln. 1-52*); and a candidate-preparation instructing section for instructing said word candidate preparing section to prepare a following word candidate from a word string selected by said operating section (*col. 6, ln. 1-52*).

Huang et al. (5829000) fail to disclose an utterance pre-processing section for extracting a feature amount of an utterance of from said input section. However, Huang et al. (5937384) teach an utterance pre-processing section for extracting a feature amount of an utterance of from said input section (*figure 2*).

Since Huang et al. (5829000) and Huang et al. (5937384) are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Huang et al. (5829000) by incorporating the teaching of Huang et al. (5937384) in order to create HMM to compare with HMM stored in memory to improve speech recognition accuracy.

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10. Regarding claims 6 and 22, Huang et al. (5829000) fail to specifically disclose that the candidate-preparing step (b) determines a phrase-based candidate by an extension process to repeat word linking according to a word-based linkage probability. However, Huang et al. (5937384) teach that the candidate-preparing step (b) determines a phrase-based candidate by an extension process to repeat word linking according to a word-based linkage probability (*col. 12, ln. 1 to col. 14, ln. 67*).

Since Huang et al. (5829000) and Huang et al. (5937384) are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Huang et al. (5829000) by incorporating the teaching of Huang et al. (5937384) in order to enhance speech recognition accuracy of phrases.

11. Regarding claims 3, 7, 15, and 19, Huang et al. (5829000) further disclose that the candidate determining step (b) further having a process to update the candidate due to an acoustic score (*col. 15, ln. 40-65*).

12. Regarding claims 4, 8, 16, and 20, Huang et al. (5829000), further disclose that the extension process is ended by reaching of the number of phrase candidates subjected to said extension process a predetermined number as counted from a top rank in a language score (*col. 3, ln. 58 to col. 4, ln. 28 and col. 5, ln. 7-53*).

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13. Regarding claims 9-12, the modified Huang et al. (5829000) fail to disclose that apparatus is included in a cellular telephone. However, the examiner takes official notice that cellular telephone having speech recognition capability is well known in the art. One of the advantages of having speech recognition capability in cellular telephone is to enable users to dial telephone numbers by voice without having their eyes off the road while driving.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

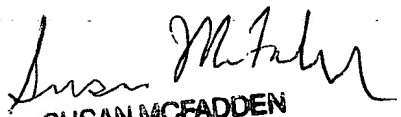
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HXV

April 29, 2005


SUSAN MCFADDEN
PRIMARY EXAMINER